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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/638,091	08/11/2000	John J. Andres	500700	7546

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EXAMINER	
PREVIL, DANIEL	

ART UNIT	PAPER NUMBER
2636	13

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/638,091	ANDRES ET AL.	
	Examiner	Art Unit	
	Daniel Previl	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

This action is responsive to communication filed on August 8, 2003.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fierro (US 5,705,979) in view of Peltier et al. (US 5,708,414).

Regarding claim 1, Fierro discloses the step of sensing a first hazardous condition (control logic responds to a signal from the ionization chamber 22 in the presence of smoke) (abstract; col. 3, lines 3-5) and generating an alarm signal on the single line (placing a predetermined signal on the signaling wire 20) (col. 3, lines 3-12, abstract)

Fierro discloses every feature of the claimed invention but fails to explicitly disclose at least one voltage pulse having a duration less than 100 milliseconds.

However, Peltier discloses at least one voltage pulse having duration less than 100 Msec (waveform 370 is generated by microprocessor from the control panel for about 100 milliseconds) (col. 11, lines 48-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peltier in Fierro.

Doing so would communicate devices to determine if an alarm condition exits at any of the smoke or gas sensors, wherein the sensors would be able to quickly detect a true fire, while being able to resistant false fire indications.

Regarding claims 2-3, the above combination discloses all the limitations in claim 1 and Peltier further discloses a plurality of voltage pulses to form a multi-bit alarm signal (col. 8, lines 9-55).

Regarding claim 4, the above combination discloses all the limitations and Peltier further discloses an upper nibble of the eight-bit alarm signal and a lower nibble of the eight bit (col. 8, lines 9-55).

Regarding claims 5-6, the above combination fails to disclose a duration between approximately 25 to 50 milliseconds every 100 milliseconds to form the multi-bit alarm signal. Since, Peltier discloses a duration about 100 Msec (col. 11, lines 48-64). It is well known in the art to use a duration between 25 to 50 milliseconds every 100 milliseconds to quickly detect a true fire, while being able to resistant false fire indicators. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a duration between 25 to 50 milliseconds to quickly detect a true fire, while being able to resistant false fire indicators.

Regarding claim 7, the examiner takes the official notice that "a voltage pulses at a frequency of approximately 10 hertz" is well known in the art.

Regarding claim 8, the above combination discloses all the limitations in claim 1 and Peltier further discloses alarm signal is repeated periodically during the first sensed hazardous condition (fig. 1; fig. 13).

Regarding claims 9-10, the above combination discloses all the limitations and Dawson further discloses a first multi-bit pattern and a second multi-bit pattern indicating the start and the end of the first hazardous condition (fig. 12-13; col. 8, lines 8-55).

Regarding claim 11, Fierro discloses a smoke condition (abstract; col. 3, lines 3-14); generating a smoke alarm signal on the single signal line (abstract; col. 3, lines 3-14); a DC voltage (col. 3, lines 7-9).

Fierro discloses every feature of the claimed invention but fails to explicitly disclose a signal having a duration longer than 100 milliseconds.

However, Peltier discloses a duration longer than 100 milliseconds (col. 11, lines 48-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peltier in Fierro. Doing so would provide electrical energy during the communication process. Wherein, the type of information can be easily identify to prevent false alarm.

Regarding claims 12, 15, 19, Fierro discloses an alarm circuit (alarm panel 28) (fig. 2, ref. 28); an interconnection I/o circuit (interconnection via a three wire bus 12 having a pair of wires 14, 16) (col. 59-67); a

microcontroller (control logic 34) coupled to the alarm circuit (alarm panel 28) and the interconnection I/O circuit (bus 12) the microcontroller (control logic 34) determines a first alarm condition (smoke detection) (col. 3, lines 24-30) and a second alarm condition upon receipt of a DC signal (wire failures about 3 volts DC to about 5 volts DC) (col. 3, lines 3-11); the microcontroller determining the first alarm condition (smoke detectors) (col. 3, lines 24-25), and to generate a second alarm condition upon determining the second alarm condition (wire failures) (col. 3, lines 24-33)

Fierro discloses every feature of the claimed invention but fails to explicitly disclose a duration less than 100 milliseconds.

However, Peltier discloses a duration less than 100 milliseconds (col. 11, lines 48-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peltier in Fierro. Doing so would provide electrical energy during the communication process. Wherein, the type of information can be easily identify to prevent false alarm.

Regarding claim 13, the above combination discloses all the limitations in claim 12 and Peltier further discloses a microprocessor determining an appropriate alarm pattern for the first alarm condition from the pattern (fig. 8).

Regarding claim 14, the above combination discloses all the limitations in claim 12 and Peltier further discloses a microprocessor determining an operating mode from the pattern (fig. 8).

Regarding claim 16, the above combination discloses all the limitations in claim 12 and Peltier further discloses an eight-bit alarm message (col. 8, lines 8-55).

Regarding claims 17-18, the above combination discloses all the limitations in claim 12 and Peltier further discloses a logic level 1, an output ground to signify a logic level 0 (fig. 8; col. 8, lines 8-55).

Regarding claim 20, Fierro discloses a first hazardous condition detector (smoke detector) (col. 3, lines 24-30); a second hazardous condition detector (wire failures) (col. 3, lines 26-30); a 3-wire interconnect coupling first detector to second detector (fig. 2; col. 2, lines 61-63); second detector is operable to generate a constant DC level on the interconnect to indicate of a second hazardous condition (wire failures is about 3 volts DC to 5 volts DC) (col. 3, lines 1-11).

Fierro discloses every feature of the claimed invention but fails to explicitly disclose a multi bit alarm message.

However, Peltier discloses a multi-bit alarm message (col. 8, lines 8-55).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peltier in Fierro. Doing so would

provide electrical energy during the communication process. Wherein, the type of information can be easily identify to prevent false alarm.

Response to Arguments

3. Applicant's arguments filed on 8-8-2003 have been fully considered but they are not persuasive.

According to Applicant's argument on page 2, "Peltier fails to even suggest generation of an alarm signal including a voltage pulse". The examiner respectfully disagrees with the Applicant because Peltier discloses a waveform 370 that includes pulses 374a and 374b to indicate a fault condition at the smoke detector having a duration approximately 100 milliseconds (col. 11, lines 48-64).

The examiner examines the claims as broad as they are.

According to Applicant's argument on page 3 "Neither Fierro nor Peltier discloses or suggests a method of communicating multiple hazardous condition alarms". The examiner strongly disagrees with the Applicant because Fierro discloses the step of interconnecting a plurality of smoke detectors and a central alarm panel (fig. 1-fig. 4; col. 1, lines 35-37). And also the recitation " communicating multiple hazardous condition alarms" is in the preamble of claim 1, it is not recited in the body of the claim. Therefore, it has not been given patentable weight.

According to Applicant's argument on page 4 "Fierro does not disclose generating multiple alarms types". The examiner disagrees with the Applicant because

Fierro discloses a plurality of alarms (audible alarms are energized upon sensing either smoke detection or AC power failure) (abstract).

Contrary to Applicant's argument on page 4 that states " neither Fierro nor Peltier discloses a microcontroller that determines a first alarm condition"; Fierro discloses an audible alarm controller 74 that detects a smoke detection signal for two different conditions (col. 4, lines 6-10).

Peltier discloses 8-bit serial digital word with the mode of operation of the smoke detector (col. 8, lines 50-54) and also the waveform 370 represents pulses 374a and 374b that detect fault condition (fig. 13, col. 11, lines 49-54).

The combination of Fierro and Peltier discloses every feature of the claimed invention.

For at least the above reason, the rejection of claims 1-20 is sustained.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ahmed (US 4,114,089) discloses a ground fault detecting apparatus including current-responsive threshold detective circuitry.

Funk (US 4,080,568) discloses an energy-monitoring device.

Godwin (US 5,898,369) discloses a communicating hazardous condition detector.

Gnagi et al. (US 3,665,461) discloses an apparatus for monitoring the conductors or lines of fire alarm installations.

Kimura (US 4,733,224) discloses a detector system with multiple sensors each sensing different danger conditions.

Ogawa (US 4,163,226) discloses an alarm condition detecting apparatus and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 703 305 4717. The fax phone numbers for the

organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-4700.

Daniel Previl
Examiner
Art Unit 2632

DP
October 6, 2003

JEFFERY HOFSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600